

Work Order ID 148268

148268

Page 1

Tuesday, June 28, 2016 8:59:20 AM

Item ID: 646.3301 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Upper Cutter Assy
 Start Date: 6/1/2016 Start Qty: 5.00 ***5*** Cust Item ID:
 Required Date: 6/27/2016 Req'd Qty: 5.00 ***5*** Customer:
 Reference:

Approvals: Process Plan: DAS 21 Date: JUL 04 2016 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
646.3300	NC3								

110 Pick Kit 0.00
110
 Packaging Memo 0.07
 Packaging

5 DAS 36 9-89 JUL 19 2016

120 0.00
120
 Small Fab Memo 0.50
 Small Fab TWO fastener must be install finger-tight (see note 9)

SX 16/08/01 DAS 36 9-89

Assemble as per dwg and apply loctite 598 on all faying surfaces shown on dwg per note 7.

A/R RTV LOCTITE 598: 135017
 exp. date: 01/18

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Work Order ID 148268

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Page 2

Item ID: 646.3301

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Upper Cutter Assy

Start Date: 6/1/2016 Start Qty: 5.00

5

Cust Item ID:

Required Date: 6/27/2016 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

NR1

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC5- Inspect part completeness to step on W/O	0.00							DAS 16 9-89
130						45			
QC	Memo	0.07							16/08/04
Quality Control									
140	Identify as per dwg & Stock Location: <u>CCN18</u>	0.00							DAS 6 9-89
140									
Packaging	Memo	0.02							(S) PC
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***								AUG 04 2016
150	QC21- Final Inspection - Work Order Release	0.00							
150									DAS 21 9-89
QC	Memo	0.01							AUG 05 2016
Quality Control									

DAS
21
9-89

AUG 05 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Picklist Print

Tuesday, June 28, 2016 8:59:19 AM

Page 1

Work Order ID: 148268

148268

Parent Item: 646.3301

646 3301

Parent Item Name: Upper Cutter Assy

Start Date: 6/1/2016

Required Date: 6/27/2016

Start Qty: 5.00

Required Qty: 5.00

Comments:

IPP REV:A 12.10.19 NEW ISSUE DD VERF:JLM
REV:B 15.01.07 AS PER DWG NC3 DD VERF:JLM

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
646.3310 *646 3310* LH Half - Upper Cutter Assembly		Manufactured	No			110	Each	11.0000	1	5			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				CCK022				11					
				142474				11					
646.3311 *646 3311* RH Half - Upper Cutter Assembly		Manufactured	No			110	Each	18.0000	1	5			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				CCK022				18					
				141005				6					
				142624				12					
646.3312 *646 3312* Center Plate		Manufactured	No			110	Each	12.0000	1	5			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				cck103				12					
				142633				12					
646.3313 *646 3313* Upper Guide		Manufactured	No			110	Each	22.0000	1	5			DAS 6 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				cck059A				22					
				136507				4					
				141020				18					

DQA: _____ Date: _____

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Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																				
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																				
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																				
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																				
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																				
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																				
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																				
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																				
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																				
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																				
OTHER : ☐																																																																							

Picklist Print

Tuesday, June 28, 2016 8:59:19 AM

Page 2

Work Order ID: 148268

148268

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assy

Start Date: 6/1/2016

Required Date: 6/27/2016

Start Qty: 5.00

Required Qty: 5.00

646.3314 Manufactured No 110 Each 8.0000 1 5

646.3314

Blade

DAS
6
9-89

Location

Loc Qty

Loc Code

cck103

8

142644

8

646.3315 Manufactured No 110 Each 10.0000 1 5

646.3315

Blade

DAS
6
9-89

Location

Loc Qty

Loc Code

cck103

10

142476

10

646.3316 Manufactured No 110 Each 11.0000 1 5

646.3316

Blade

DAS
6
9-89

Location

Loc Qty

Loc Code

cck103

11

142636

11

NAS1149FN832P Purchased No 110 Each 3,303.000 36 180

NAS1149FN832P

Washer

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

397

M133316

16

M133769

381

ST260a

2800

M134257

1200

M135058

1600

ST263

106

M133709

106

JUL 19 2016

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Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____						
Misidentified	☐	Past Due	☐							

Picklist Print

Tuesday, June 28, 2016 8:59:19 AM

Page 3

Work Order ID: 148268

148268

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assy

Start Date: 6/1/2016

Required Date: 6/27/2016

Start Qty: 5.00

Required Qty: 5.00

MS21042L08

Purchased

No

110

Each

1,188.000

18

90

MS21042L08

Nut

DAS

9-89

Location

Loc Qty

Loc Code

GA

280

m133134

3

m134063

277

ST303

891

m133922

37

m134574

4

m134654

300

m134962

200

m135046

350

ST308

17

m134376

17

NAS1149F0332P

Purchased

No

110

Each

3,179.000

6

30

NAS1149F0332P

Washer

DAS

9-89

Location

Loc Qty

Loc Code

GA

312

m133709

312

ST262

2867

m134257

37

m134676

830

m135058

2000

AN3-12A

Purchased

No

110

Each

87.0000

2

10

AN3-12A

Bolt

DAS

9-89

Location

Loc Qty

Loc Code

ST349

87

m133064

16

m134257

71

Tuesday, June 28, 2016 8:59:19 AM

Shop Packet Print

Page 3

JUL 19 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

Tuesday, June 28, 2016 8:59:19 AM

Page 4

Work Order ID: 148268

148268

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assy

Start Date: 6/1/2016

Required Date: 6/27/2016

Start Qty: 5.00

Required Qty: 5.00

MS21042L3

Purchased

No

110

Each

1,775.000

3

15

MS21042L3

Nut

DAS
6
8-00

Location

Loc Qty

Loc Code

CCK007

600

m135056

600

FP001

32

m133790

32

GA

171

m133790

3

m134360

168

ST303

972

m134039

12

m134634

2

m134754

158

m134943

800

13

MS27039-08-19

Purchased

No

110

Each

578.0000

18

90

MS27039-08-19

Screw

DAS
6
8-00

Location

Loc Qty

Loc Code

GA

388

m132930

84

m133077

22

m134063

82

m134294

100

m135046

100

ST277

190

m134142

190

90

JUL 19 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

Picklist Print

Tuesday, June 28, 2016 8:59:19 AM

Page 5

Work Order ID: 148268

148268

Parent Item: 646.3301

646 3301

Parent Item Name: Upper Cutter Assy

Start Date: 6/1/2016

Required Date: 6/27/2016

Start Qty: 5.00

Required Qty: 5.00

AN3-14A

Purchased

No

110

Each

139.0000

1

5

AN3-14A

Bolt

Location

Loc Qty

Loc Code

over003

80

m134852

30

m135056

50

ST349

59

m134360

9

m134634

50

DAS
8
9-09

JUL 19 2016

5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04765

SHEET 1 OF 1

DWG NO. 646.3300

REV: NC

PREPARED BY J. SOTO

DATE: 12/08/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: UPPER CUTTER ASSY

APPROVED BY:

ENGR

MFG

QC

EFF.

NEXT ORDER

TRANSACTION CODES (TC):

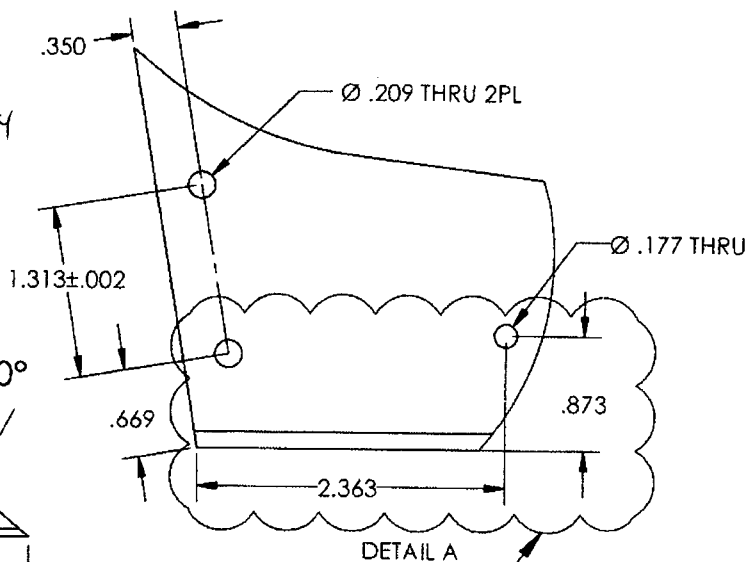
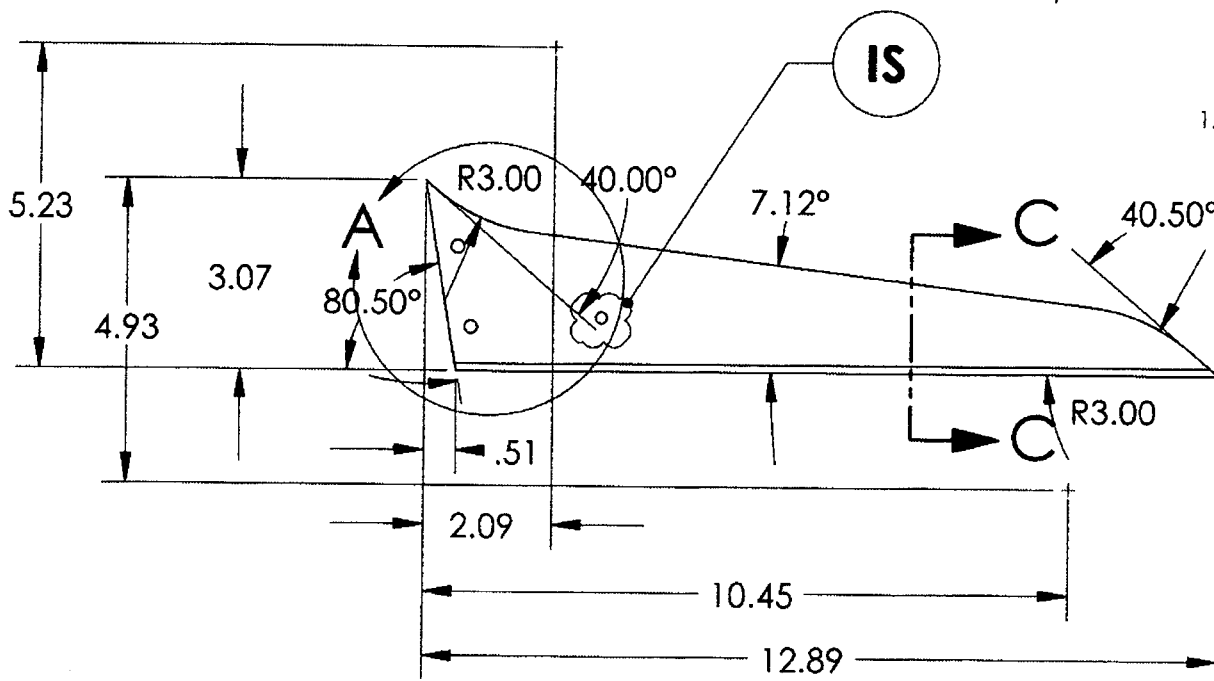
A-ADD
R-REVISE

C-CREATE
D-DELETE

REASON: ADDED HOLE DIMENSION TO 646.3313.

SHEET 5 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 148268 MLS
1607-04



DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

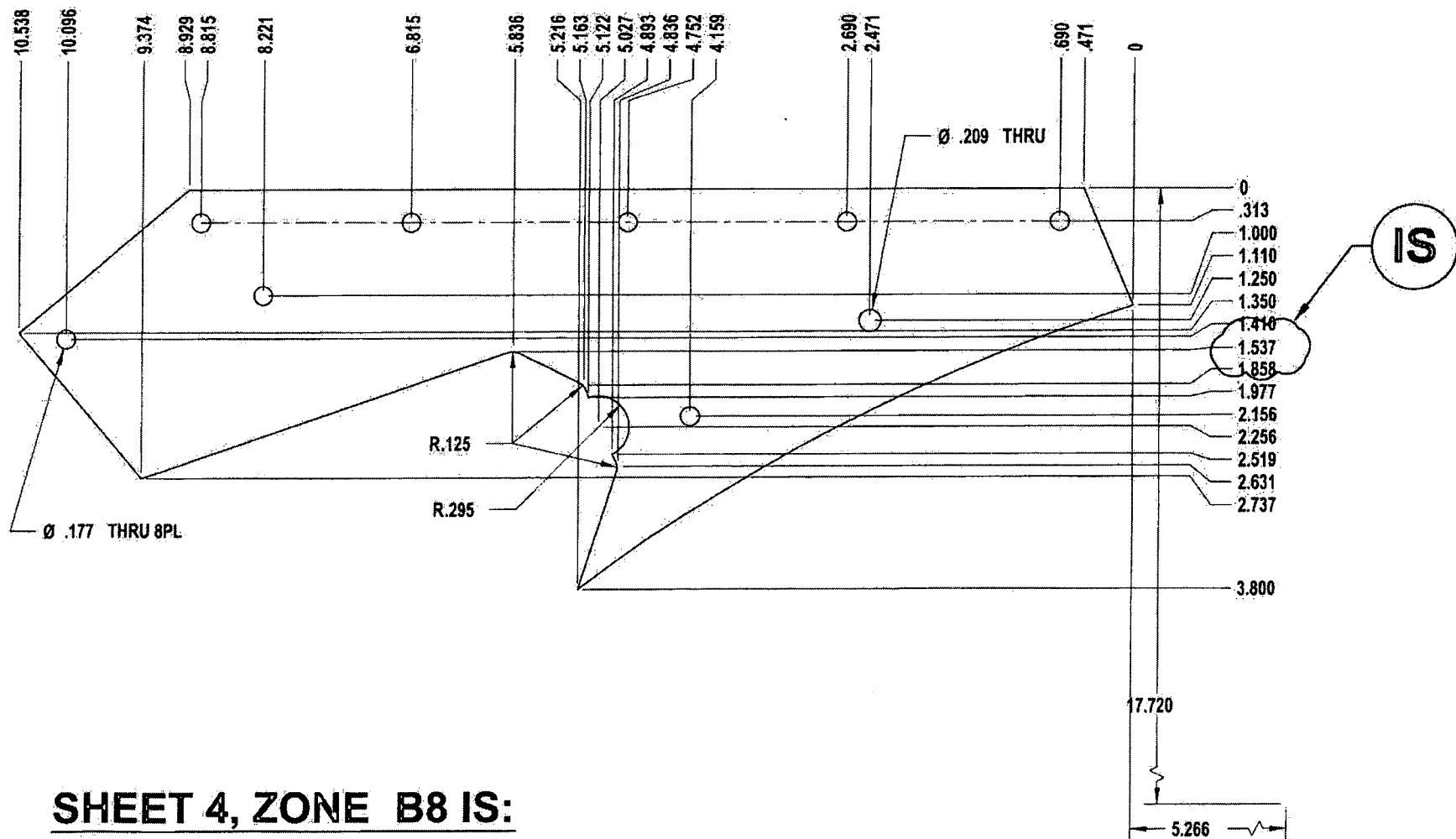
CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03724				SHEET 1 OF 1	
	DWG NO. 646.3300	REV: N/C	PREPARED BY B. PETERS	DATE: 12/05/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: UPPER CUTTER ASSY					
APPROVED BY: ENGR <i>[Signature]</i>		MFG <i>[Signature]</i>		QC <i>[Signature]</i>	EFF: NEXT ORDER	
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED ORDINATE DIMENSION.				ECR: D-12-025

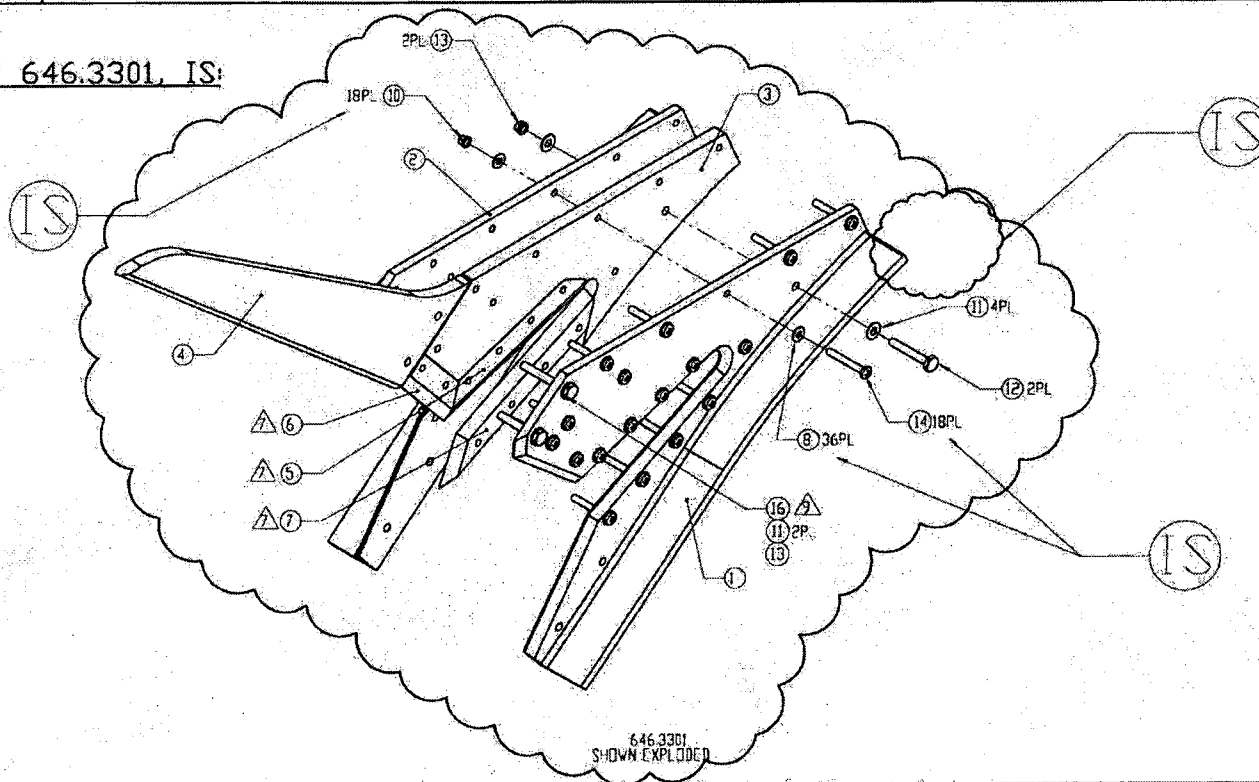


SHEET 4, ZONE B8 IS:

DOCUMENTS EFFECTED:	☐ RFMS ☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☐ BOM	CHANGE CATEGORY	DER REVIEW REQUIRED
		☐ MAJOR ☒ MINOR	☐ YES ☒ NO

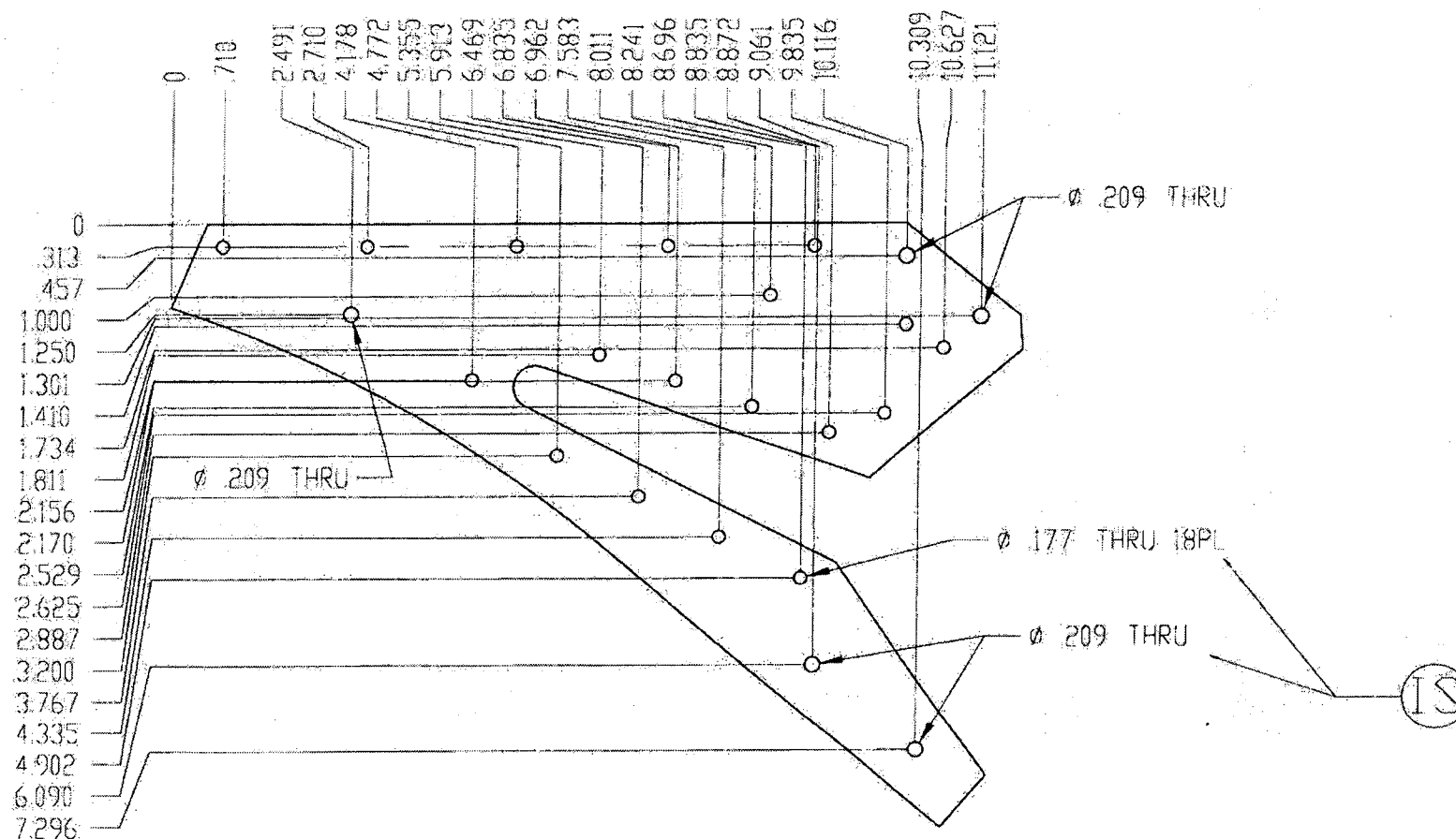
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02196		SHEET 1 OF 2	
	DWG NO. 646.3300	REV: N/C	PREPARED BY S. HUFF	DATE: 01/05/09
	EFFECT ON DWG ☐ INC. ☒ UNINC.			
	DWG TITLE: UPPER CUTTER ASSY			
APPROVED BY: ENGR <i>[Signature]</i>		MFG: <i>[Signature]</i>	QC: <i>[Signature]</i>	EFF: NEXT ORDER
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REMOVED RIVETS IN FAVOR OF ADDITIONAL SCREWS		

SHEET 1, VIEW 646.3301, IS:



14	R	601.2765	18	SCREW	MS27039-0819
10	R	601.1541	18	LOCKNUT	MS21042L08
9	D	601.2766	3	RIVET	MS20470AD5-18
8	R	601.2764	36	WASHER	NAS1149FN832P
			3301		
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
DOCUMENTS EFFECTED: ☐ MDL ☒ INSTALL INSTRU ☒ ICA ☐ FMS ☒ BOM					CHANGE CATEGORY: ☐ MAJOR ☒ MINOR
					DER REVIEW REQUIRED: ☐ YES ☒ NO

SHEET 3, SECTION VIEW A-A, IS:

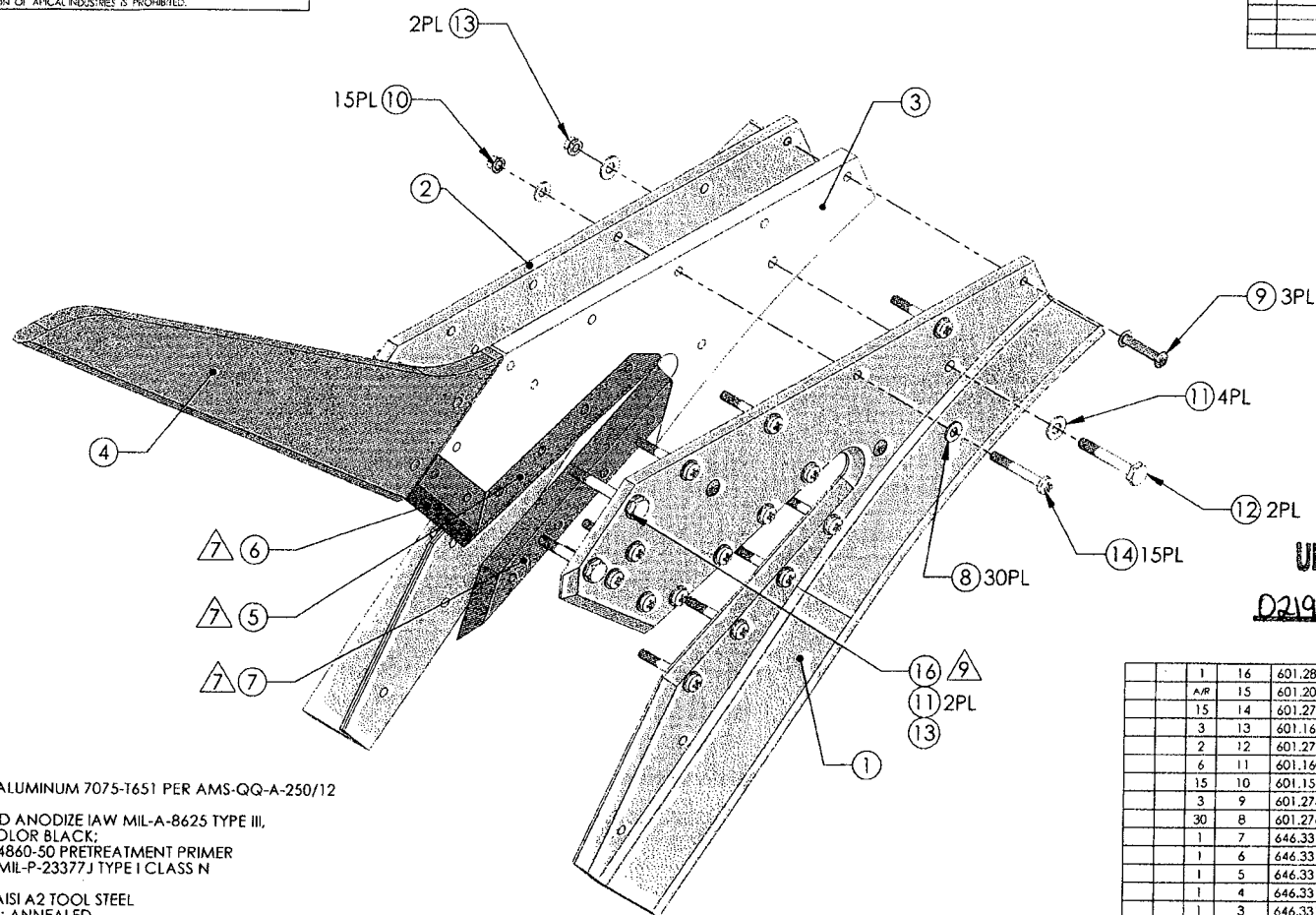


SECTION A-A

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



UNINCORPORATED ECN(S)

02196, 03724, 04765

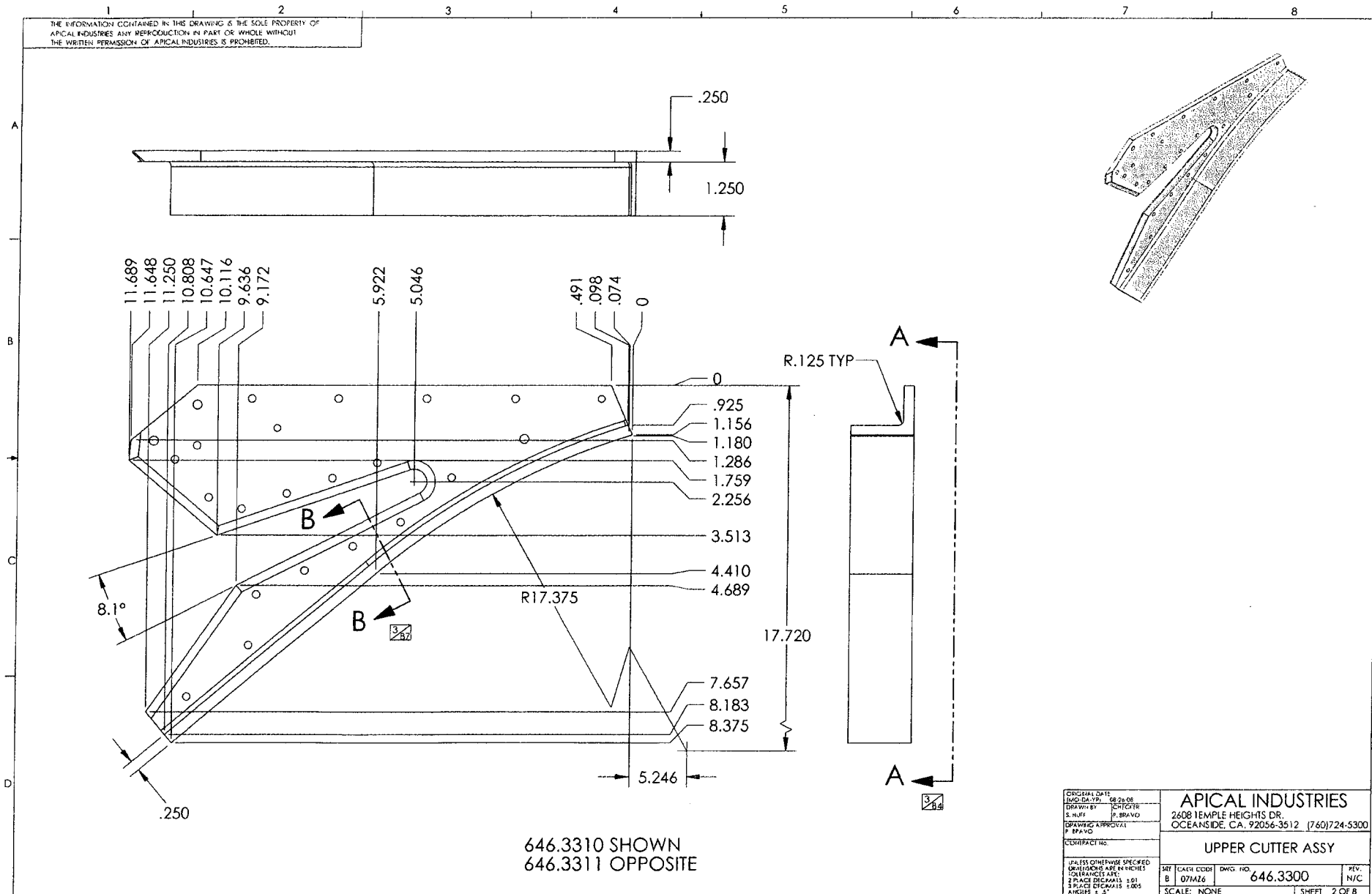
NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 MATERIAL: AISI A2 TOOL STEEL CONDITION: ANNEALED POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
- 7 APPLY F/N 15 AS REQUIRED TO ALL FAYING SURFACES OF F/N 5, 6 & 7 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 INSTALL FASTENER FINGER-TIGHT

646.3301
SHOWN EXPLODED

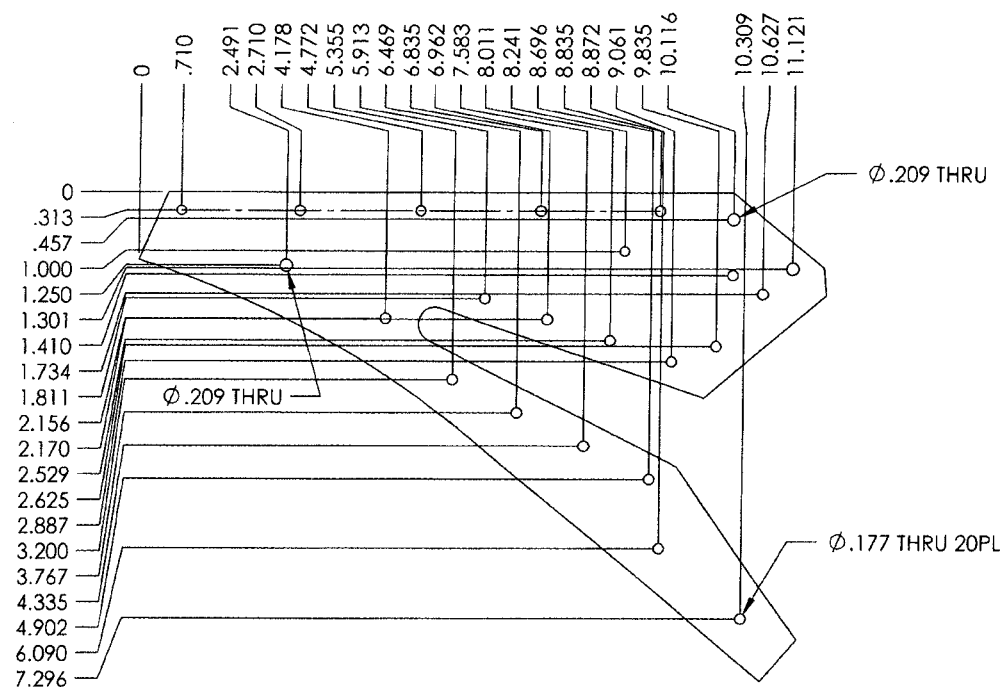
QTY	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
1	16	601.2834	BOLT	AMS 18A	
15	15	601.2045	RTV. LOCITE 598		
15	14	601.2765	SCREW	MS27039-08-15	
3	13	601.1624	LOCKNUT	MS21045-3	
2	12	601.2763	BOLT	ANSI 12A	
6	11	601.1607	WASHER	MS114790332P	
15	10	601.1541	LOCKNUT	MS21042-08	
3	9	601.2766	RIVET	MS20478A DS-18	
30	8	601.2764	WASHER	MS114790332P	
1	7	646.3316	BLADE		
1	6	646.3315	BLADE		
1	5	646.3314	BLADE		
1	4	646.3313	UPPER GUIDE		
1	3	646.3312	CENTER PLATE		
1	2	646.3311	RH HALF		
1	1	646.3310	LH HALF		
1		646.3301	UPPER CUTTER ASSY		
PARTS LIST					
APICAL INDUSTRIES					
2608 TEMPLE HEIGHTS DR.					
OCEANSIDE, CA. 92056-3512 (760)724-5300					
UPPER CUTTER ASSY					
UNLESS OTHERWISE SPECIFIED					
DIMENSIONS ARE IN INCHES					
FRACTIONS ARE 1/16"					
DECIMALS ARE .01"					
ANGLES ARE 1/2"					
SCALE NONE					
SHEET 1 OF 8					

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APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT
THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



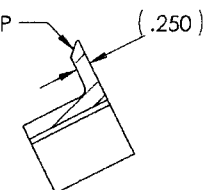
ORIGINAL DATE: 08-26-08 DRAWN BY: J. HUFF S. HUFF DRAWING APPROVAL: P. BRAVO CONTRACT NO.:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		UPPER CUTTER ASSY	
REV. B	DATE CODE 07M26	DWG. NO. 646.3300	REV. N/C
SCALE: NONE		SHEET 2 OF 8	

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SECTION A-A

.200 X 45.0° TYP

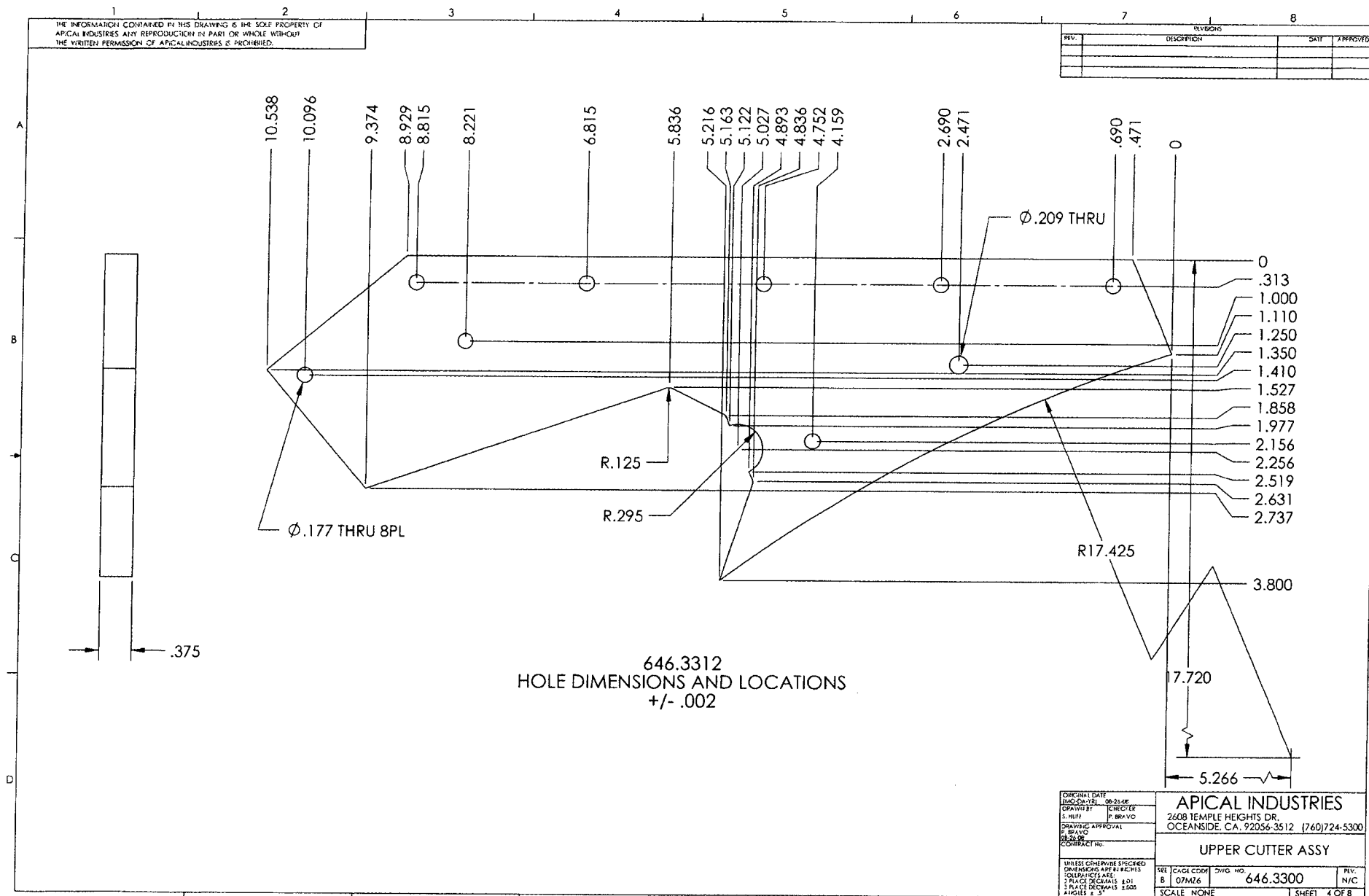


SECTION B-B

ORIGINAL DATE: 08-26-99		APICAL INDUSTRIES	
DRAWN BY: J. HOFF	CHECKED: P. BRAY	2608 TEMPLE HEIGHTS DR.	
DESIGNED BY: J. HOFF	APPROVED: P. BRAY	OCEANSIDE, CA. 92056-3512 (760) 724-5300	
COMPANY NO.		UPPER CUTTER ASSY	
UNLESS OTHERWISE SPECIFIED		SHEET: B	REV: N/C
DIMENSIONS ARE IN INCHES		CAGE CODE: 07M26	DWG. NO: 646.3300
TOLERANCES ARE:		SCALE: NONE	SHEET: 3 OF 8
2 PLACE DECIMALS ±.01			
3 PLACE DECIMALS ±.005			
ANGLES ±.5°			

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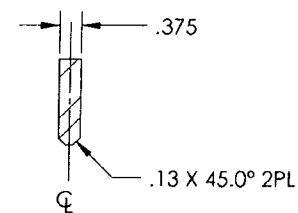
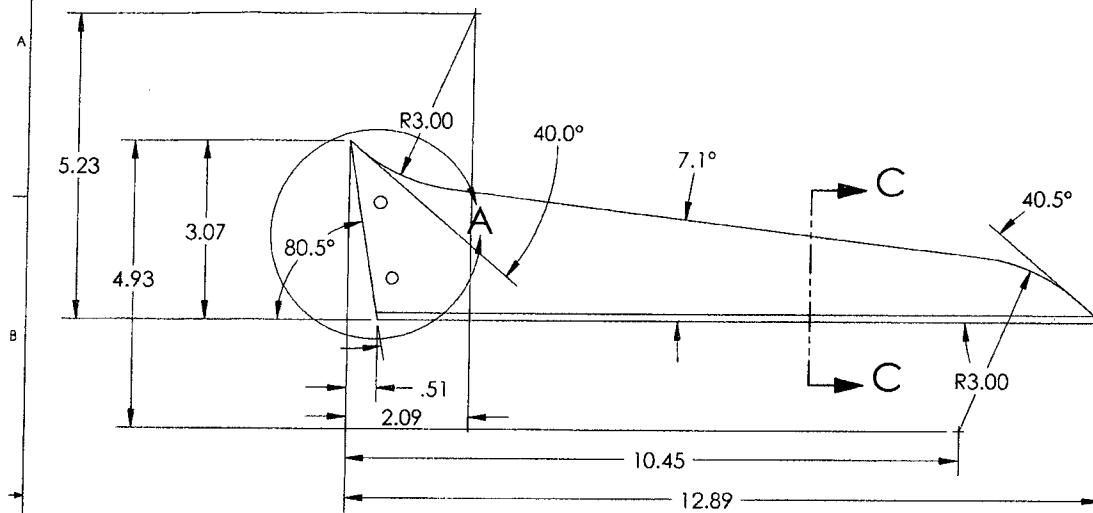
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



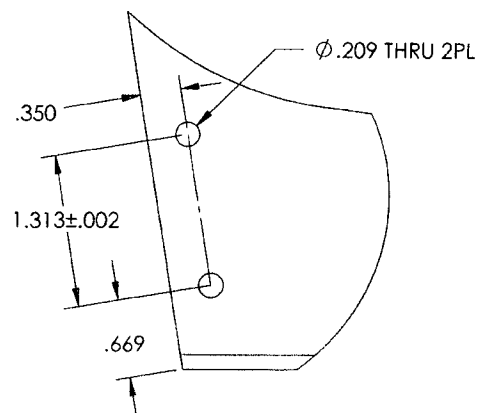
ORIGINAL DATE (MM-DD-YY) 06-24-06		APICAL INDUSTRIES	
DRAWN BY S. HUFF		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA, 92056-3512 (760)724-5300	
CHECKED BY P. BOWEN		646.3300	
DRAWING APPROVAL P. BOWEN		SHEET 4 OF 8	
CONTRACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE: 1 PLACE DECIMALS .101 2 PLACE DECIMALS .005 ANGLES ± .5°		REV. N/C	

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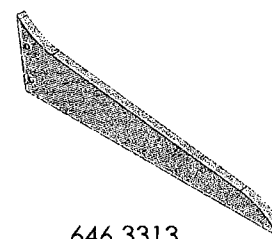
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



SECTION C-C



DETAIL A

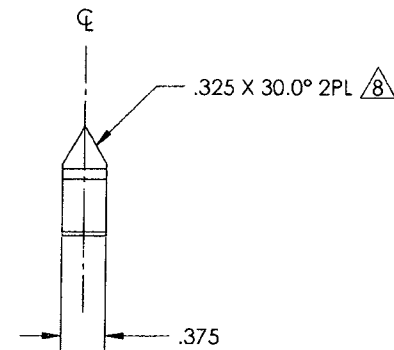
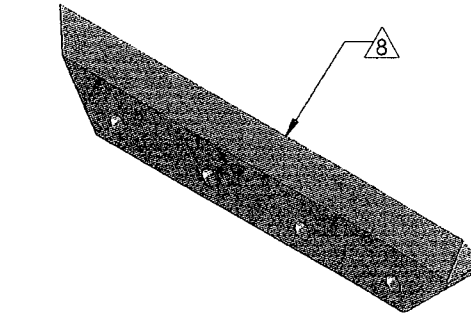
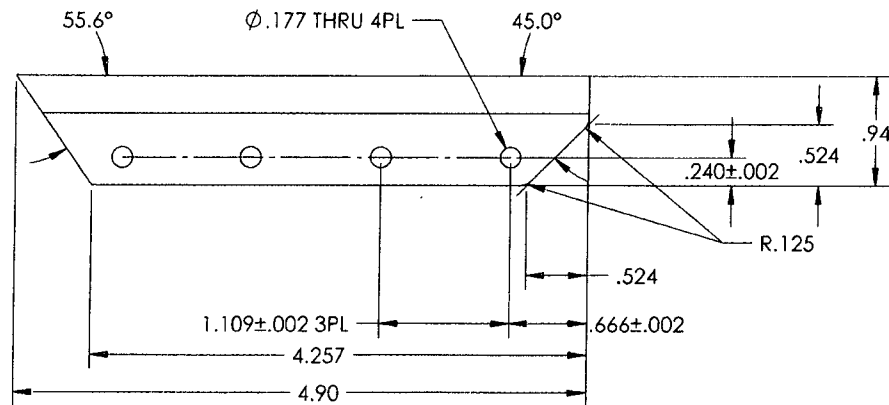


646.3313

ORIGINAL DATE (MO/DA/YR) 08-28-08		APICAL INDUSTRIES	
DRAWN BY C. HILKER		2608 TEMPLE HEIGHTS DR.	
S. HOFF		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL J. BRAND		UPPER CUTTER ASSY	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		SHEET CODE B 07M26	DWG NO. 646.3300
		SCALE NONE	REV. N/C
		SHEET 5 OF 8	

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REVISION			
REV.	DESCRIPTION	DATE	APPROVED

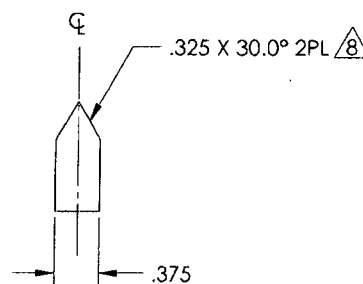
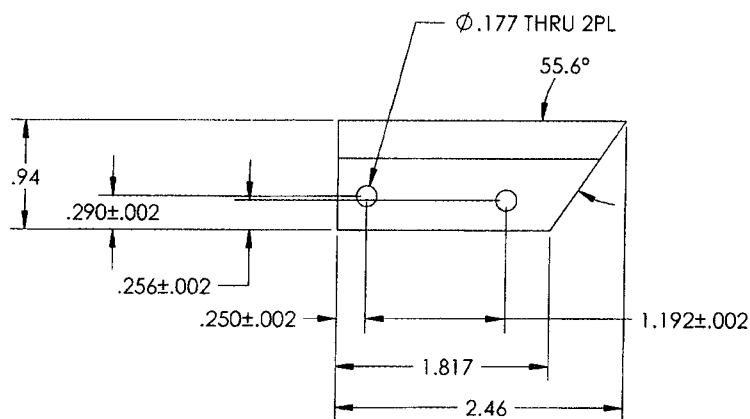
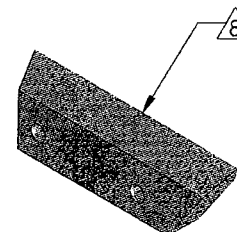


646.3314

ORIGINAL DATE (MO/DA/YR) 08/26/08		APICAL INDUSTRIES	
DRAWN BY: J. HUBB		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: J. BEAVER		OCEANSIDE, CA 92056-3512 (760)724-5300	
DRAWING APPROVAL: J. BEAVER		UPPER CUTTER ASSY	
08/26/08			
CONTRACT NO.:			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		121 CAGE CODE DWG. NO. B 07M26 646.3300	REV. N/C
SCALE: NONE		SHEET 6 OF 8	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

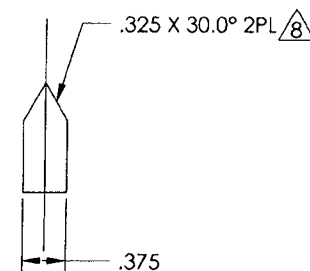
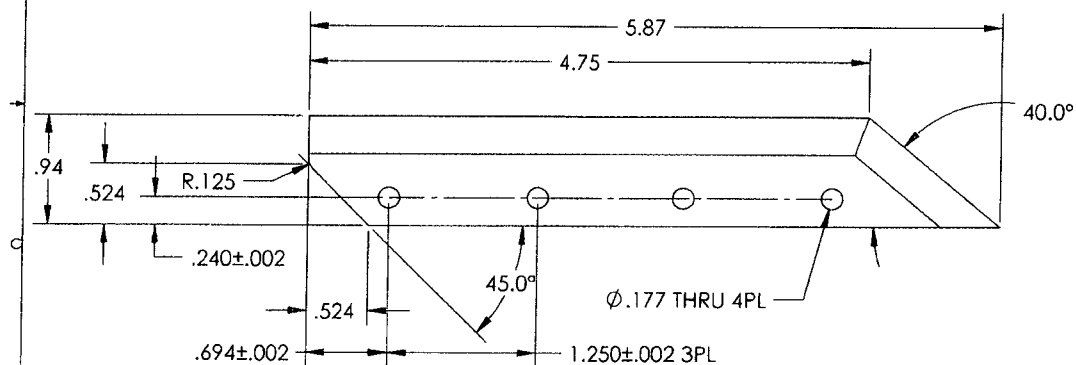
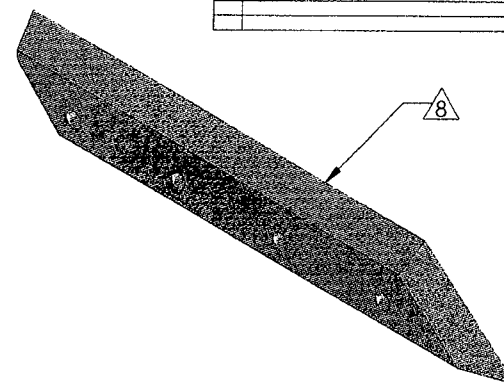


646.3315

ORIGINAL DATE 1/20/04-1/21/08	08-26-08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
DRAWN BY C. C. C. C.	CHECKER P. BRAVO			
DRAWING APPROVAL P. BRAVO	08-26-08			
CONTRACT NO.				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°				
REV: N/C		SEE TACK CODE 8 07M26	DWG NO 646.3300	REV N/C
SCALE: NONE		SHEET 7 OF 8		

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



646.3316

ORIGINAL DATE 08-24-08		APICAL INDUSTRIES	
DRAWN BY P. BRAVO	CHECKED P. BRAVO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		UPPER CUTTER ASSY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.2°		SHEET B	REV N/C
SCALE NONE		DWG. NO. 646.3300	SHEET 8 OF 8